

Application No. 10/692,460
Response dated April 24, 2009
Response to Office Action dated December 24, 2008

REMARKS

Responsive to the Office Action mailed December 24, 2009, Applicants provide the following amendments and arguments. Claim 4 has been amended, without adding any new matter. Initially, the Applicants thank the Examiner for acknowledging the allowability of claims 24-27. Claims 21-23 have been canceled, since they were earlier withdrawn. Claims 1-20 and 24-30 remain pending in this application. Reconsideration of claims 1-20 and 28-30 in view of the amendment above and remarks below is respectfully requested.

Claim Rejections Based on 35 USC § 102

Claims 1-6, 8-20, and 28-30 have been rejected under 35 USC 102 (b) as anticipated by U.S. Pat. 5,545,167 to Lin ("Lin"). The Lin patent shows a cross member for a rodding system that is substantially different than that of the present application and includes two retaining bolts (200), two washers (500), two fastening nuts (400), and a U-shaped connection element (300).

Claims 1, 4, and 8 are not anticipated, or even obvious, in view of Lin. Each of those claims requires:

...a locking member for being shifted between a clamped position with the locking member clamping the spinal rod against the contact surface and an unclamped position with the spinal rod released; and

a rotatable actuator operable to shift the locking member between the clamped and unclamped positions...

Although the locking nut (400) of Lin does serve to lock an end of the cross member or connection element (300) with respect to a spinal rod, it does not serve to shift the structure identified in the Office Action as a “locking member” (rectangular head 220) with respect to the structure identified as a “contact surface” (inner surface of 210). Rather, the two rectangular heads 220 are placed together manually so that the ring 210 is clamped around the spinal rod 100 and then the rectangular heads 220 are fitted through fitting hole 430 in the locking nut. Rotation of the locking nut 400 (“actuator”) does not shift the spinal rod into contact with the inner surface 210, and it does not shift the rectangular heads 220 with respect to the contact surface or ring structure 220, but rather clamps the U-shaped connection element (300) to the “locking members” (square heads 220) and ring 200 encircling the spinal rod (100). Therefore, independent claims 1, 4, and 8, as well as their respective dependent claims, are allowable over the Lin patent.

Furthermore, claim 4 has been amended to require that each rotatable actuator is at least partially disposed in a spinal rod connecting device. The locking nut 400 of Lin surrounds the square heads 220 of the structure identified in the Office Action as a spinal rod connection device (200), but is not partially disposed in the rod connection device. Therefore, claim 4 and its dependent claims further avoid anticipation and obviousness for this additional reason.

Independent claims 10, 16, and 30 are not anticipated or obvious based on Lin because Lin does not contain a number of structures required by those claims. First of all, the Office Action states that the rotatable locking member (400) of Lin is a “sleeve” within the meaning of independent claims 10, 16, and 30. However, this ignores the

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context of the claims, since the claimed sleeve must extend about the rod receiving member, which in turn receives an end of the cross rod. The locking nut 400 of Lin does not form a sleeve, and it does not extend about a rod receiving member. Structure 500 of Lin, identified as the receiving member by the Office Action, does not “receive” a cross rod, but rather is a washer that is clamped against the U-shaped connection member 300. Further, the washer 500 does not have a bore located along a receiver axis and configured for adjustably receiving a cross rod end. Since the washer is essentially flat, it cannot receive a cross rod within itself. For these reasons, independent claims 10, 16, and 30 are not anticipated or obvious, nor are their respective dependent claims.

Claims 10, 16, and 30 further require a clamp device for clamping a cross rod received in a rod receiving member. The alleged cross rod of Lin is not received in a rod receiving member, and is not clamped by a clamp member while located in the rod receiving member. Furthermore, the alleged cross rod is not fixed at an adjusted angle and an adjusted depth within the receiving member. Instead, the flattened cross member of Lin has a U-shaped portion that is arranged outside of a retaining bolt and clamped thereto by a locking nut. This bears no resemblance to the structure required by claim 10, 16 or 30 and therefore does not anticipate or render obvious those claims or claims depending from them.

Claim Rejections Based on 35 USC § 103

Claim 7 has been rejected as obvious in view of Lin. For the reasons described above with respect to independent claim 1, dependent claim 7 should be allowable. In addition, it would not be obvious to modify the rotatable actuator (locking nut 400) of

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Lin to function in an apparatus as claimed in claim 7. In Lin, the locking nut 400 pulls upward on the heads 220 of the retaining bolts 200 that are placed through the locking nut. It would not be obvious based on the locking nut of Lin to provide a locking device with a bore and an actuator that rotates within the bore to lock a spinal rod in place. The structure of Lin is much different than the claimed structure. For this additional reason, allowance of claim 7 is respectfully requested.

CONCLUSION

Applicants submit that the pending claims 1-20 and 24-30 are in condition for allowance based on the arguments above. Therefore, a Notice of Allowance is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication or credit any overpayment to Deposit Account No. 06-1135.

Respectfully submitted,
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